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ABSTRACT

This study investigates cognitive dissonance and self-perception theories, utilizing the bogus pipeline to measure attitude change. Subjects were 48 college students. They were assigned randomly to one of four experimental groups, on the basis of extreme "pro" scores on an issue dealing with student participantion in university course planning. Findings demonstrate that subjects who wrote a counter-attitudinal essay against an issue on which they initally held a positive attitude adjusted their attitudes in a direction more consistent with what they wrote in the essay. This is consistent with hundreds of other studies, but no reliable difference was detected between the bogus pipeline and self-report subjects and the interaction effect of two independent variables. Of the major paradigms attempting to explain attitude change following counter-attitudinal advocacy, self-perception theory seems to account for the data with least effort. (JLL)

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Dissonance, self-perception and the bogus pipeline

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Cognitive Dissonance Theory has been attacked and reformulated over the years, as you know. The question concerning what (if anything) is dissonant with what has been asked and answered in a variety of ways, and there has been frequent questioning of the conceptual status of what Festinger called "knowledges" between which the dissonant relation forms. One source of the confusion may have been the way in which the "knowledges" were formulated in the first place. Although it has not always been clearly stated that these discrepant "knowledges" must be conscious, the critical statements of dissonance theorists use a language that implies that they they ought to be, e.g., "The term dissonance and consonance refer to relations which exist between pairs of elements .... These elements refer to what is called congition, that is, the things a person knows about himself, about his behavior, and about his surroundings." (Festinger, 1957, p. 9)

Again, as stated by Festinger and Carlsmith (1959):

Let us consider a person who privately holds opinion X but has, as a result of pressures brought to bear on him,

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> publicly stated that he believes "not X". This person has two congitions which, psychologically, do not fit together; one of these is the knowledge that he believes X, the other the knowledge that he has publicly stated that he believes not X .... his cognition of his private belief is dissonant with his cognition concerning this actual public statement. (p. 203)

In recent years this conceptual problem has appeared in discussions of those elusive "awarenesses" either posited or denied in the exchanges between Daryl Bem, auther of self-perception theory (1972), and his adversaries. Also quite lately, the dissonance-attitude-change relation has been discussed as a general attribution phenomenon by Harold Kelley (1971), in terms of explanations of arousal states by Mark Zanna and Joel Cooper (1974) and by Kiesler (1974) in terms of resolutions of departures from optimal levels of activation caused by incongruity in the situation. The arguments about the presence or absence of multiple knowledges (or whatever) in the minds of subjects when their final attitude is assessed in a dissonance experiment will probably never be settled. But we may be able to help specify one of the limits of dissonance theory if we make believe, and if our subjects actually believe,that we can tap "true attitudes". Another way to say this is that although we may never be able to say what dissonance <u>is</u>, we maybe can say what it is not.

I will assume that you are all familiar with the methodological and ethical discussions of the bogus pipeline by Jones and Segall (1973), Ostrum (1973), and Brigham, Bloom, Gunn and Torok (1974). Needless to say, use of the technique seemed appropriate to us for the question under investigation here.

The alternative hypotheses investigated in this study are as follows. If a person has performed a counter-attitudinal behavior for a low incentive, and if he feels that an experimenter has access to his "true attitude", he cannot easily ignore, or otherwise easily distort, his cognition that he believes thus-and-so <u>if</u> this attitude, <u>and</u> the awareness that he has behaved counter-attitudinally, are both represented consciously. When measured by the bogus pipeline, he should not show the attitude change that would normally be expected from the usual self-report measure.

Self-perception theory would predict a different response from persons who have attitude change measurements taken with the bogus pipeline. If the individual relies upon observing his own behavior to draw conclusions about his attitude towards the issue, and if he really does "forget" his intial attitude, the presence of an instrument that can apparently measure his true affective response should be irrelevant; he should show the same amount of attitude change as the individual who makes an

unmonitored self-report.

Method

Subjects were forty-eight students from an introductory psychology course who received credit for taking part in a study of "Current Campus Issues". They were assigned randomly to one of four experimental groups, on the basis of extreme "pro" scores on an issue dealing with student participation in university course planning.

Procedure for Subjects in Group I

Upon arriving at the laboratory, the subject was told that the experimenter was interested in comparing the persuasiveness of arguments presented on video tape recordings to those presented on audio tape recordings. He was told that his task would be to write a short essay and then record it on audio tape so that it could subsequently be rated by other subjects for its persuasiveness. To provide a model for the subject's argument, a three minute video tape recording was played. An individual on this tape argued in favour of the issue: "Canada should do away with its Armed Forces". When this tape was finished, the experimenter asked the subject if he would write an essay in favour of the primary experimental issue: "Students should not have representation in planning content of courses taught to them in university".

The subject worked on his argument for about ten minutes

and then recorded his statement on the audio tapes. This completed, the experimenter asked the subject if he would agree to have his attitude towards some issues measured, supposedly to provide the experimenter with a standard of typical university student attitudes.

He was asked to move across the room to where the "bogus pipeline" was located. It was explained that the attitudes of subjects in future experiments would be measured using this apparatus, and, for the sake of consistency, it would be preferable if this attitude were also measured in this way. He was introduced to the "EMG" machine, and told how it worked as "a sort of lie detector".

In order to establish credibility of the apparatus with the subject the experimenter supposedly made some "fine adjustments" to the EMG by asking the subject to agree or disagree with two statements: (1) "You do not have a tendency to be critical of yourself", and (2) "While you have some personality weaknesses, you are generally able to compensate for them". Those statements were chosen because people typically respond to them in a similar way, disagreeing with the first and agreeing with the second. The experimenter appeared to be satisfied with the measurements taken of the subject's "attitude".

The experimenter asked two dependent variable questions

at this time. The post-manipulation attitude questions were: (1) Primary Issue; "What is your best estimate of the machine's measurement of your true attitude with respect to the following: Students should have representation in planning content of courses taught to them at university? and (2) Secondary Issue; "What is your best estimate of the machine's measurement of your true attitude with respect to the following. To protect and control water resources, North America should attempt to formulate a continental water policy by the year 1975"?

Procedure for Subjects in Group

A typical subject from Group II experienced the same procedure as the subject in Group I above except that he did not receive the deception manipulation with respect to the bogus pipeline. After agreeing to an attitude measurement by the experimenter, the subject was asked to sit in front of the response console. Electrodes were out of view of the subject. It was explained that concentration and attention may be improved if responses are made with the apparatus rather than a verbal or paper-and-pencil response. He was told to adjust the dial on the console so that the needle would indicate the spot on the 19-point scale that was closest to his true attitude. The two preliminary questions were asked, in this condition, to give the subject a chance to become familiar with the response procedure.

Procedure for Subjects in Group III

A typical subject in Group III condition experienced the same procedure as the subject in Group I condition except that the assumed counter-attitudinal advocacy was on a Secondary Issue: "North America should not attempt to formulate a continental water policy by the year 1975". This was in one sense a control manipulation, allowing a subject to write on something else, while measuring his attitude on the student representation issue. As we will see, we almost came up with a second experimental issue!

Procedure for Subjects in Group IV

A typical subject in Group IV condition experienced the same procedure as the subject in Group II, except that the counter-attitudinal advocacy was on the water policy issue, as used with Group III. Thus, the subject wrote an essay against a continental water policy and had his post-manipulation attitudes measured without the bogus pipeline. All subjects received an honest and completely informative debriefing session, during which the reason for deception was explained.

Results

Manipulation effectiveness. Only two of the subjects, when told that the experiment involved deception, stated that they had been at all suspicious. Results of attitude measures with the Primary question: "Students should have representation in planning content of courses taught to them at University", are in Table 1 and analysis of them is

shown at the bottom, left of Table 2. Subjects who wrote counter-attitudinal essays, against Student Representation made significanlty more negative ($p = .003$) (i.e., made higher scores) to that same question than did subjects who wrote essays on the Water Policy Issue. The table also shows a nonsignificant bogus pipeline effect

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Insert Tables 1 and 2 about here

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and interaction, indicating employment of the bogus pipeline did not significantly influence subsequent attitude statements.

The analysis of attitude responses to the question for the Secondary Issue, "To protect and control water resources, North America should attempt to formulate a continental water policy by the year 1975", is shown at the bottom right-hand side of Table 2. The counter-attitudinal advocacy effect was found again to be significant at the $p = .003$ level.

It is notable that the bogus pipeline effect approached significance, with the secondary issue, but this is not as troublesome as it might appear. The Student Representation Issue (I) was selected empirically so that all subjects would hold the same initial attitude; we chose the secondary,Water Policy Issue (II) intuitively, as an issue to which most people would probably hold a similar attitude. However, Group I, the group of subjects who wrote on the Student Representation Issue and responded via the

bogus pipeline, showed an unexplainably negative attitude toward a continental water policy. It is difficult to explain as other than sampling vagary why this measurement was not closer to the favourable attitude response produced by the self-report subjects but it pushed what otherwise would appear to be a bogus pipeline effect close to a significant probability level. Again, the interaction was not significant.

Discussion

A reliable behavioral phenomenon has once again been demonstrated and then replicated: subjects who wrote a counter-attitudinal essay against an issue on which they initially held a positive attitude, adjusted their attitudes in a direction to be more consistent with what they wrote in the essay. This was consistent with hundreds of studies, but what can be made of the fact that no reliable difference was detected between the bogus pipeline and self-report subjects and the interaction effect of the two independent variables clearly was non-significant?

Snyder and Ebbesen (1972) discuss the issue of conscious awareness, but in a somewhat different way, in that they are concerned with effects that follow from a prior cognition's being made salient by an experimental procedure, when nothing like such a manipulation seems required in dissonance theory's cornerstone statements. As well, Goethals and Reckman (1973) have invoked a "new dissonance phenomenon", distortion of recall,

to talk around the awareness issue; but it is difficult to see how such thinking constitutes an improvement over a self-perception explanation.

We cannot state that cognitive dissonance theory could never be stretched to accomodate these findings (I personally prefer an arousal-based, motivated forgetting explanation); we can suggest, however, that of the major paradigms attempting to explain attitude change following counter-attitudinal advocacy, self-perception theory still seems to account for the data with least effort. Undoubtedly, numerous social psychologists have regretted that dissonance theory was not given firmer mooring in its initial articulation by Festinger and his associates. Many subsequent problems seem to lie, not with the theoretical principles themselves, but with the language of the theory's statement. As Greenwald (1975) so clearly details, too much has been left for individual researchers to interpret and the resulting effusion has been often contradictory or ambiguous. Thus, perhaps, we should do fewer studies trying to prove what dissonance is. Maybe we should try to show what dissonance is not, or cannot be.

Table 1. Design and Manipulations

	Argument			
	Empirically Counter-attitudinal "No Student Representation		Anticipated Counter-attitudinal "No Continental Water Policy"	
Measure by:	Bogus Pipeline	Self-reports	Bogus Pipeline	Self-reports
Measures on: Student Rep.	6.17	Student rep. 5.08	Student rep. 3.25	Student rep. 3.08
Water policy	6.42	Water policy 2.67	Water policy 10.08	Water policy 8.33
	n=12	n=12	n=12	n=12

Table 2. ANOVA results: Responses to student representation and water policy issues.

	Student representation				Water policy			
Source of variance	df	Ms	F	p	df	Ms	F	p
Counter-attitudinal advocacy effect	1	75.52	10.04	<.005	1	261.33	10.46	<.005
Bogus pipeline	1	4.69	.65	.43	1	90.75	3.63	.06
Interaction	1	2.52	.35	.56	1	12.00	.48	.50
Within cells	44	7.22			44	24.98		

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